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Conference Abstract

Using Collections in Specify to Manage Incoming Exchange Data

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Abstract

The Specify collection management system has been designed to accommodate data from multidisciplinary collecting institutions through a series of administrative units arranged in a hierarchical structure (Specify Collections Consortium 2024). Within the parent Institution, there can be multiple Divisions; within the parent Division there can be multiple Disciplines; and within the parent Discipline there can be multiple Collections (Fig. 1).

Institution	Natural History Museum							
Division	Vertebrate Zoology				Botany			
Discipline	Ichthyology		Herpetology		Non-Vascular Plants		Vascular Plants	
Collection	Wet	Dry	Amphibians	Reptiles	Mosses	Lichens	Herbarium	Pollen

Figure 1.
Specify's Institution, Division, Discipline and Collection hierarchy.

While these administrative units were originally intended to house distinct collections within an institution, the model allows for flexibility and creativity in how they are implemented.

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The National Herbarium of Victoria's (MEL) implementation of Specify utilises a single Discipline with 11 Collections. As well as storing data associated with sub-collections housed within the Herbarium—such as the Victorian Reference Set, which supports Royal Botanic Gardens Victoria's plant identification service, and the Victorian Conservation Seedbank collection—Specify Collections are used to support curation workflows, including the management of data associated with specimens received as exchange material from other herbaria.

The exchange of specimens between herbaria is a long-standing practice that enriches local collections and provides a form of insurance against damage or loss of specimens at the originating herbarium. Most consignments of exchange specimens are now accompanied by digital data, which helps streamline the data entry process and reduces the likelihood of transcription errors in the receiving institution's collection management system.

The National Herbarium of Victoria receives an average of 3000 exchange specimens from Australian and international herbaria each year. Due to resourcing constraints, incoming exchange specimens cannot always be processed upon receipt and are instead relegated to a curation backlog.

Using the separate 'Incoming Exchange' Collection within Specify as a holding database for exchange data allows herbarium curators to upload the data at the time it is received as a guard against the loss or dissociation of specimen data, while allowing data validation work and the reconciliation of exchange specimens with their data to be postponed until staff resourcing permits, and after the specimens have been mounted. This
workflow also allows exchange specimens to be reconciled with their data—and the data to be validated against the MEL data model—before being published into the main 'National Herbarium of Victoria' Collection, which forms our contribution to the Australasian Virtual Herbarium and, by extension, the Global Biodiversity Information Facility.

Exchange data is uploaded to the 'Incoming Exchange' Collection via the Specify Workbench with the sending institution's catalogue numbers recorded in the 'Other identifier' table for each record, but no MEL catalogue numbers applied. Once the exchange data is matched with a physical specimen and validated against the MEL data model, a MEL catalogue number is entered into the 'collectionObject.CatalogNumber' field. A stored procedure runs each night, transferring records with a CatalogNumber from the 'Incoming Exchange' Collection to the 'National Herbarium of Victoria' Collection, where they can be viewed by all user groups (Table 1).

Table 1.

MEL's 'incoming' data management procedure using Structure Query Language (SQL), which transfers records from the 'Incoming Exchange' Collection to the 'National Herbarium of Victoria' Collection

```
CREATE DEFINER=`admin`@`%` PROCEDURE `melisr`.`incoming`()
BEGIN
   DECLARE var_collectionID INT;
   SET var_collectionID = 163840;
   SET @DISABLE_TRIGGER=1;

   START TRANSACTION;
   UPDATE collectionobject co
   LEFT JOIN collectionobjectattribute coa ON co.CollectionObjectAttributeID=coa.CollectionObjectAttributeID
   LEFT JOIN determination d ON co.CollectionObjectID=d.CollectionObjectID
   LEFT JOIN preparation p ON co.CollectionObjectID=p.CollectionObjectID
   LEFT JOIN preptype pt1 ON p.PrepTypeID=pt1.PrepTypeID
   LEFT JOIN preptype pt2 ON pt1.Name=pt2.Name AND pt2.CollectionID=4
   LEFT JOIN otheridentifier oi ON co.CollectionObjectID=oi.CollectionObjectID
   SET co.AltCatalogNumber=IF(SUBSTRING(co.AltCatalogNumber, 1, 3)='MEL', CAST(TRIM(SUBSTR
(co.AltCatalogNumber, 5)) AS UNSIGNED), CAST(TRIM(SUBSTR(co.AltCatalogNumber, 1, 7)) AS UNSIGNED
)),
      co.Modifier=IF(SUBSTRING(co.AltCatalogNumber, 1, 3)='MEL', 'A', TRIM(SUBSTR(co.AltCatalogNumber,
8))),
      co.`Name`=IF(SUBSTRING(co.AltCatalogNumber, 1, 3)='MEL', CONCAT('MEL ', CAST(TRIM(SUBSTR
(co.AltCatalogNumber, 5)) AS UNSIGNED)), CONCAT('MEL ', CAST(TRIM(SUBSTR(co.AltCatalogNumber, 1,
7)) AS UNSIGNED))),
      co.CatalogNumber=IF(SUBSTRING(co.AltCatalogNumber, 1, 3)='MEL', CONCAT(TRIM(SUBSTR
(co.AltCatalogNumber, 5)), 'A'), TRIM(co.AltCatalogNumber)),
      co.CollectionID=4,
      co.CollectionMemberID=4,
      coa.CollectionMemberID=4,
      d.CollectionMemberID=4,
      p.CollectionMemberID=4,
      p.PrepTypeID=pt2.PrepTypeID,
      oi.CollectionMemberID=4,
      co.TimestampCreated=NOW(),
      co.TimestampModified=NOW(),
      co.Version=1
   WHERE co.CollectionID=var_collectionID AND co.AltCatalogNumber IS NOT NULL;
   SET @DISABLE_TRIGGER=NULL;
   COMMIT;
END
```

Keywords

herbarium, data, specimens

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Conflicts of interest

The authors have declared that no competing interests exist.

References

- Specify Collections Consortium (2024) Specify model for institutions. https://discourse.specifysoftware.org/t/specify-model-for-institutions/655. Accessed on: 2024-7-22.